

5.5/6

21 (100)

Discussion Questions

1. What would happen to the number of upper trophic level organisms if the first trophic level population were to dramatically **decrease**? Why?

The Upper trophic level organisms would have to adjust their energy consumption habits if the first trophic level decreased dramatically, or else they would begin to decrease or become extinct because they need energy to live.

2. What would happen to the number of upper trophic level organisms if the lower trophic level organism's population were to dramatically **increase**? Why?

If the number of lower trophic level organisms dramatically increased, the number of upper level trophic organisms would stay close to the same, because there is only so much one can consume. However, it would ensure survival of these species.

3. What **type of organisms** could we add to the food chain/web that would make the chain a cycle [circular]? Where would you place them?

To make the web a cycle, I would add something that decomposes into the soil which benefits the producers. I could place a cow in the web, which gets consumed, but eventually dies and decomposes. grasshopper fungus = decomposer

4. How many organisms depend on the grasshopper for their food? List them below.

The Frog, the Rat, the blue Jay, the Robin, the Swallow, the turtle, the Owl, and more depend on the grasshopper for food.

5. What do you think the **keystone species** is in the food web? Why?

I believe the grasshopper is the keystone species because it provides energy to so many other organisms, disproportionate to its size and location on the web.

6. Think about what might happen if the trout was infected with mercury. What would happen to the food chain? How would it affect the other organisms?

If the trout were to be infected with mercury, all animals that consume the trout would be affected. These organisms could be subject to health problems and could die. If the organism was dependent on trout as its major source of energy, they would be at highest risk.